

Word Quest

Find the following terms in your Interactive Worktext on pages 45–66. Underline or highlight the word in your Interactive Worktext each time you find it in the lesson. Complete the table below by writing a sentence from the text in which the word occurs, and then write your own sentence with the word in it.

TERMS	CONTEXT SENTENCE	YOUR OWN SENTENCE
tradeoff pg. _____		
iterating pg. _____		
criteria pg. _____		
constraints pg. _____		
decision matrix pg. _____		
prototype pg. _____		
stress pg. _____		

Review the words in the context sentences on this page. Underline or circle any you do not know. Working with a partner, find the definitions of these words. Record them in your own sentences in your Evidence Notebook.

You Write About It

- 1.** Write a brief informational text that explains to a reader what makes the engineering design process an iterative process and why this is important.

- 2.** Is a design matrix most useful when the criteria of a solution are similar or different? Explain.

- 3.** How do engineers use the engineering design process to determine whether materials, natural and manufactured, stay stable or deform and break?

Home Connection

Have students take this page home to share with family members. Encourage them to share what they have learned about the engineering design process.



tradeoff

The giving up of one thing in return for another, often applied to the engineering design process.



iterate

To do again or repeat; in design testing, the results of each repetition are used to modify the next version of the design.



criterion

The specific requirements and standards a design must meet; in engineering design, a specific requirement that a design or solution should meet, often determined when defining a problem.



constraint

A restriction or limitation; in engineering design, a limitation that a design or solution must stay within, often determined when defining a problem.



decision matrix

A decision-making tool for evaluating several options at the same time.



intercambio

Dar algo a cambio de otra cosa, suele aplicarse al proceso de diseño técnico.

iterar

Hacer de nuevo o repetir; en las pruebas de diseño, los resultados de cada repetición se utilizan para modificar la siguiente versión del diseño.

criterio

Requisitos y estándares específicos con los que debe cumplir un diseño; en diseño técnico, un requisito específico con el que debe cumplir un diseño o solución, a menudo determinado cuando debe definirse un problema.

restricción

Restricción o limitación; en diseño técnico, una limitación con la que debe cumplir un diseño o una solución, a menudo determinada cuando se debe definir un problema.

matriz de decisiones

Herramienta para la toma de decisiones que sirve para evaluar diversas opciones al mismo tiempo.



prototype

A test model of a product.

prototipo

Modelo de prueba de un producto.



stress

The force per unit area within an object; the internal resistance of an object to an applied force.

tensión

Fuerza por unidad de área dentro de un objeto; la resistencia interna de un objeto a una fuerza aplicada.



